

**Commonwealth of Kentucky**  
**Division for Air Quality**

**PERMIT APPLICATION SUMMARY FORM**

Completed by: Durga Patil

GENERAL INFORMATION:

|                            |                                       |
|----------------------------|---------------------------------------|
| Name:                      | Kentucky West Virginia Gas Company    |
| Address:                   | 126 Monument Drive<br>Dwale, KY 41621 |
| Date application received: | 4/21/2008                             |
| SIC Code/SIC description:  | 1311, Crude Petroleum and Natural Gas |
| Source ID:                 | 21-071-00138                          |
| Agency Interest:           | 44058                                 |
| Activity:                  | APE20080002                           |
| Permit:                    | V-08-015                              |

APPLICATION TYPE/PERMIT ACTIVITY:

|   |  |
|---|--|
| <input type="checkbox"/> Initial issuance               | <input type="checkbox"/> General permit                    |
| <input checked="" type="checkbox"/> Permit modification | <input type="checkbox"/> Conditional major                 |
| __Administrative  | <input checked="" type="checkbox"/> Title V                |
| __Minor   | <input checked="" type="checkbox"/> Synthetic minor        |
| X Significant   | <input type="checkbox"/> Operating                         |
| <input type="checkbox"/> Permit renewal                 | <input checked="" type="checkbox"/> Construction/operating |

COMPLIANCE SUMMARY:

|   |   |
|---|---|
| <input type="checkbox"/> Source is out of compliance                | <input type="checkbox"/> Compliance schedule included |
| <input checked="" type="checkbox"/> Compliance certification signed |   |

APPLICABLE REQUIREMENTS LIST:

|  |  |   |
|--|--|---|
| <input type="checkbox"/> NSR                   | <input type="checkbox"/> NSPS  | <input checked="" type="checkbox"/> SIP |
| <input type="checkbox"/> PSD                   | <input checked="" type="checkbox"/> NESHAPS  | <input type="checkbox"/> Other          |
| <input type="checkbox"/> Netted out of PSD/NSR | <input checked="" type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b) |   |

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☒ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☒ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

| Pollutant           | 2007 actual emissions (tpy) | Modified facility potential emissions (tpy) |
|---------------------|-----------------------------|---|
| PM/PM <sub>10</sub> | 3.6                         | 0.058                                       |
| SO <sub>2</sub>     | 0.05                        | 0.070                                       |
| NO <sub>x</sub>     | 598.84                      | 438.05                                      |
| CO                  | 59.91                       | 34.54                                       |
| VOC                 | 7.2                         | 86.89                                       |
| Single HAPs         |                             |   |
| Acetaldehyde        | 0.7                         | <9  |
| Acrolein            | 0.13                        |   |
| Benzene             | 0.57                        |   |
| Ethylbenzene        | 0.03                        |   |
| Formaldehyde        | Not listed                  |   |
| Methanol            | Not listed                  |   |
| n-Hexane            | 1.24                        |   |
| Toluene             | 0.36                        |   |
| Xylene              | 0.13                        |   |
| Source wide HAPs    | 3.2                         | <22.5                                       |

SOURCE DESCRIPTION:

Natural gas enters the station via a distribution pipeline system and is first compressed using two (2) natural gas-fired compressors, identified as Units #1 and #2. The compressed natural gas stream is then processed through the existing TEG dehydration unit. The dehydration unit filters the natural gas and separates excess water using a distillation process in which heat is provided to the dehydration unit column by a natural gas-fired reboiler, rated at 1.25 mmBtu/hr. The natural gas stream from the dehydration unit is then reintroduced into the pipeline to be transported further along the distribution system. Liquid fractions removed from the natural gas via dehydration are stored in small storage tanks at the station.

PROPOSED MODIFICATION:

The proposed modification will consist of construction and operation of one temporary natural gas-fired compressor, one temporary triethylene glycol (TEG) dehydration unit with associated reboiler, and one 4,200 gallon condensate storage tank. The compressor, dehydration unit, and reboiler will have maximum capacities of 1,265 brake horsepower (bhp), 10 million standard cubic feet per day (mmscfd), and 0.275 mmBtu/hr, respectively. The permittee will not operate these units longer than 945 hours per rolling 12 month period and shall keep records of operating hours for the temporary units.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

The permittee shall comply with source-wide annual individual HAP emission and combined HAPs emissions limitations of 9.0 tons and 22.5 tons per rolling 12-month period.

In order to preclude the applicability of 401 KAR 51:017, for a significant emissions increase, the emission of volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) from the temporary compressor ( emission unit U05), dehydration unit (emission unit U06) and the reboiler (emission unit U07) shall be less than 40 tons per rolling 12-month period. Compliance will be demonstrated by limiting operation of the temporary units to no more than 945 hours per year.

OPERATIONAL FLEXIBILITY:

None